

REMARKS

Claims 1-25 have been cancelled. Claims 26-30 have been added, and consideration of these claims and the remarks that follow is respectfully requested. A clean set of the pending claims, 26-30, appears above.

Attached hereto is an appendix entitled, "Version With Markings to Show Changes Made", which depicts the changes made to the present application by the current amendment.

Restriction Requirement

In response to the Restriction Requirement in the Office Action dated 27 April 2002, Applicants hereby elect group II, Claims 11-14, drawn to ING2 proteins. This election is made without traverse. Claims 1-25 have been cancelled by the current amendment. New Claims 26-30 are drawn to the subject matter of elected group II.

The Office Action further restricts the invention between five ING2 species (A to E), and requires election of a particular ING2 species in the response to restriction. Applicants hereby elect species D, SEQ ID NOs:8 and 7, with traverse. Applicants point out that SEQ ID NO:8, which depicts the amino acid sequence if ING2 isoform 4 comprises the amino acid sequences of ING2 isoforms 1 (SEQ ID NO:2), 2 (SEQ ID NO:4), 3 (SEQ ID NO:6), and 5 (SEQ ID NO:10). Accordingly, Applicants submit that a search directed to species A-E would not place a burden on the Examiner above that of a search directed to species D (SEQ ID NOs:8 and 7) alone. Accordingly, the new claims added by the current amendment recite for the five ING2 protein species listed in the Office Action.

Serial No.: 09/715,725

Filed: 16 November 2000

Please direct any calls in connection with this application to the undersigned at (415)

781-1989.

Respectfully submitted,

Dorsey & Whitney LLP

Dated: 5/28/02

Robin M. Silva

Robin M. Silva

Reg. 38,304

submitted under 37 C.F.R. §1.34(a)

Four Embarcadero Center
Suite 3400
San Francisco, CA 94111-4187
Telephone: (415) 781-1989

Version with markings to show changes made.

1. (cancelled) A recombinant nucleic acid encoding a cell cycle protein comprising a nucleic acid that hybridizes under high stringency conditions to a sequence complementary to that set forth in Figure 1, 3, 5, 7, or 9.
2. (cancelled) The recombinant nucleic acid of claim 1 wherein said protein binds to an IAPs.
3. (cancelled) The recombinant nucleic acid of claim 1 comprising a nucleic acid sequence as set forth in Figure 1, 3, 5, 7, or 9.
4. (cancelled) A recombinant nucleic acid encoding a cell cycle protein comprising a nucleic acid having at least 85% sequence identity to a sequence as set forth in Figure 1, 3, 5, 7, or 9.
5. (cancelled) A recombinant nucleic acid encoding an amino acid sequence as shown in Figure 2, 4, 6, 8, or 10.
6. (cancelled) An expression vector comprising the recombinant nucleic acid according to any one of claims 1, 2, 3, 4, or 5, operably linked to regulatory sequences recognized by a host cell transformed with the nucleic acid.
7. (cancelled) A host cell comprising the recombinant nucleic acid according to any one of claims 1, 2, 3, 4, or 5.
8. (cancelled) A host cell comprising the vector of claim 6.
9. (cancelled) A process for producing a cell cycle protein comprising culturing the host cell of claim 7 or 8 under conditions suitable for expression of a cell cycle protein.

Serial No.: 09/715,725

Filed: 16 November 2000

10. (cancelled) A process according to claim 9 further comprising recovering said cell cycle protein.
11. (cancelled) A recombinant cell cycle protein encoded by the nucleic acid of any of claims 1, 2, 3, 4, or 5.
12. (cancelled) A recombinant polypeptide comprising an amino acid sequence having at least 80% sequence identity with the sequence set forth in Figure 2, 4, 6, 8, or 10.
13. (cancelled) The recombinant polypeptide of claim 12 wherein said polypeptide binds to an IAPs.
14. (cancelled) The recombinant polypeptide of claim 12 wherein said sequence is set forth in Figure 2, 4, 6, 8, or 10.
15. (cancelled) An isolated polypeptide which specifically binds to a cell cycle protein according to claim 13.
16. (cancelled) A polypeptide according to claim 15 that is an antibody.
17. (cancelled) A polypeptide according to claim 16 wherein said antibody is a monoclonal antibody.
18. (cancelled) The monoclonal antibody of claim 17 wherein said antibody reduces or eliminates the biological function of said cell cycle protein.
19. (cancelled) A method for screening for a bioactive agent capable of binding to a cell cycle protein, said method comprising:
 - a) combining a cell cycle protein and a candidate bioactive agent; and

- b) determining the binding of said candidate bioactive agent to said cell cycle protein.
20. (cancelled) A method for screening for a bioactive agent capable of interfering with the binding of a cell cycle protein and IAPs, said method comprising:
- a) combining a cell cycle protein, a candidate bioactive agent and an IAPs; and
 - b) determining the binding of said cell cycle protein and said IAPs.
21. (cancelled) A method according to Claim 20, wherein said cell cycle protein and said IAPs are combined first.
22. (cancelled) A method for screening for a bioactive agent capable of modulating the activity of cell cycle protein, said method comprising:
- a) adding a candidate bioactive agent to a cell comprising a recombinant nucleic acid encoding a cell cycle protein; and
 - b) determining the effect of said candidate bioactive agent on said cell.
23. (cancelled) A method according to Claim 22, wherein a library of candidate bioactive agents is added to a plurality of cells comprising a recombinant nucleic acid encoding a cell cycle protein.
24. (cancelled) A method of modulating tumor growth comprising administering ING2 in an effective amount.
25. (cancelled) The method of claim 24 wherein said p53 is also administered.
26. (added) A recombinant ING2 protein encoded by a nucleic acid set forth in SEQ ID NO:1, 3, 5, 7 or 9.
27. (added) A recombinant ING2 protein, comprising an amino acid sequence having at least about 90% sequence identity to the sequence set forth in SEQ ID NO:2, 4, 6, 8, or 10.

Serial No.: 09/715,725

Filed: 16 Nov mber 2000

28. (added) The recombinant ING2 protein of Claim 27, further comprising the sequence set forth in SEQ ID NO:2, 4, 6, 8 or 10.

29. (added) A recombinant ING2 protein, consisting essentially of the amino acid sequence set forth in SEQ ID NO:2, 4, 6, 8, or 10.

30. (added) The recombinant ING2 protein of Claim 27 or 29, wherein said ING2 protein will bind to an inhibitor of apoptosis protein (IAP).